

ARABIA ANTICA 12

ARCHAEOLOGICAL STUDIES

A COSMOPOLITAN CITY ON THE ARABIAN COAST  
The imported and local pottery from Khor Rori  
Khor Rori Report 3  
ALEXIA PAVAN



«L'ERMA» di BRETSCHNEIDER

ARABIA ANTICA 12  
Archaeological Studies

collana diretta da  
Alessandra Avanzini

## ARABIA ANTICA

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- 2 - A. Avanzini, *Corpus of South Arabian Inscriptions I - III. Qatabanic, Marginal Qatabanic, Awsanite Inscriptions*, 2004, pp. 606.
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A cosmopolitan city on the Arabian coast

*The imported and local pottery from Khor Rori*

## Khor Rori Report 3

ALEXIA PAVAN

*with a contribution by* ROBERTA TOMBER

«L'ERMA» di BRETSCHNEIDER

Alexia Pavan  
*A cosmopolitan city on the Arabian coast.*  
*The imported and local pottery from Khor Rori. Khor Rori Report 3.*  
(with a contribution by Roberta Tomber)

Redazione e impaginazione a cura di Alessandra Lombardi

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# Index

FOREWORD <i>by Alexander V. Sedov</i>	7
ACKNOWLEDGEMENTS	9
INTRODUCTION	
<i>General remarks</i>	11
<i>Method</i>	12
Collection and selection of the material	12
Classification	13
<i>Contents and coatings</i>	14
<i>Sealing procedures</i>	16
<i>Graffiti and inscriptions</i>	16
<i>Chronology</i>	17
1. NOTES ON THE WARES DISCOVERED IN KHOR RORI	
<i>Short compilation of the wares</i>	19
<i>Descriptions of the wares</i>	20
2. KITCHEN VESSELS	35
<i>Form I.1: pots</i>	36
<i>Form I.2: bowls</i>	45
<i>Form I.3: pans</i>	52
<i>Form I.4: lamps/lids</i>	53
<i>Form I.5: lids-cum-bowls</i>	56
PLATES	57
3. TABLE VESSELS	93
<i>Form II.1: jars</i>	94
<i>Form II.2: jugs and juglets</i>	109
<i>Form II.3: flasks</i>	110
<i>Form II.4: spouted jars</i>	111
<i>Form II.5: bottles</i>	111
<i>Form II.6: bowls</i>	112
<i>Form II.7: plates</i>	125
PLATES	127

4. STORAGE VESSELS	205
<i>Form III.1: jars</i>	206
<i>Form III.2: bowls</i>	228
PLATES	231
5. RE-WORKED VESSELS AND RE-USED SHERDS	295
PLATES	297
<i>Bibliography</i>	307
THE LATE HELLENISTIC AND ROMAN POTTERY <i>by Roberta Tomber</i>	
<i>Introduction</i>	321
<i>Method</i>	321
<i>Assemblage composition, dating and inter-site comparison</i>	322
<i>Dating and intra-site comparison</i>	326
CATALOGUE	330
<i>Fine and Coarse wares</i>	330
Black Gloss wares	330
Hellenistic Fine wares	330
Eastern Sigillata A (ESA)	333
Eastern Sigillata B (EBS)	334
Cypriot Sigillata	336
Italian Sigillata (ITS)	338
Unidentified Sigillata	339
African Red-slipped ware (ARS)	341
Unidentified Red-slipped wares	341
Thin-walled wares	341
Asia Minor Lead-glazed ware	342
Lamps	342
Egyptian wares	344
?Egyptian Coarse wares	348
Unidentified Coarse ware	349
<i>Amphorae</i>	350
Italy: Bay of Naples (Vesuvius)	350
Italy: Tyrennian Coast, including Campania	353
Brindisi	363
Spain	363
North Africa	364
Mareotis	365
Egyptian Nile alluvium	371
'Aqaba	375
Cilicia	375
Eastern Mediterranean	378
Kos	378
Rhodes	381
Aegean	381
San Lorenzo 7	384
Unidentified types	384
<i>Bibliography</i>	391

## Foreword

The third volume of *Khor Rori Reports* is entirely devoted to the study of ceramic material found during several seasons of excavations of the Italian Mission to Oman (IMTO) at the port-city of Sumhuram, the ancient site located on the coast of Dhofar. So far this is the only site in South Arabia which has been continuously investigated since 1997; in other words – during almost two decades. The results of these investigations were published in two volumes appearing in 2002 and 2008 presenting excavated structures, pottery and small finds, and re-editions of previously known inscriptions, etc.<sup>1</sup>

This book, written by Alexia Pavan, presents a general pottery typology from Sumhuram, as stated – «for the entire period of occupation of the [ancient] city, from the 3<sup>rd</sup> century BC to the 5<sup>th</sup> century AD». The material includes pottery fragments from all excavated areas and cultural layers from the city itself, neighboring sites such as temple *extra muros*, the necropolis, farmsteads as well as surface finds. The pottery catalogued in the *Khor Rori Report 1* and *Khor Rori Report 2* is also included in the volume, which is supplemented by a contribution of Roberta Tomber on Late Hellenistic and Roman pottery from Sumhuram. So, we may say that this is a really comprehensive study of one of the most numerous categories of material usually found in the course of excavations of ancient monuments – ceramic vessels.

The conclusions made from this study, especially chronological remarks, are very important for our understanding the history of the foundation and development of Sumhuram, for our knowledge about the establishment of trade connections and maritime contacts in the northern part of the Indian Ocean in the last centuries BC – first centuries AD. But some questions remain unanswered, and one of these questions regards the relations between citizens of Sumhuram, the Ḥaḍrami daughter-city, and the local indigenous population of Dhofar insofar as they can be reflected from the pottery material.

As rightly stated by the author, «Sumhuram was a ‘port of trade’ involved, from its foundation, in a dense network of commercial trades and contacts. It was a point of transit, sorting and redistribution, and so it is logical to find a large number of ceramics, for most imports». But at the same time Sumhuram existed not in an unpopulated area, and from Zarins’ investigations we know quite a lot of Iron Age Dhofari sites in close vicinity to Khor Rori lagoon, like, for instance, the Taqa TA (92:60) settlement, with its rather specific pottery assemblage.<sup>2</sup> The practical absence of such pottery in the material from Sumhuram may prompt the question: why these, although hypothetical but in many aspects quite probable, contacts are not reflected in the mass material – pottery? We have to think how to answer this question.

The second aspect which comes into question is the presence of Indian imports of the 2<sup>nd</sup> century BC as well as shards from Ḥaḍrami pottery assemblages of the 3<sup>rd</sup>-2<sup>nd</sup> centuries BC and Mediterranean imports of the very late 1<sup>st</sup>

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<sup>1</sup> AVANZINI 2002; 2008.

<sup>2</sup> ZARINS 2001: 86-90, fig. 33b-33d.



century BC – beginning of the 1<sup>st</sup> century AD in one and the same stratigraphical units. The author's explanation that «while ... imports from the Mediterranean area started to arrive in the late 1<sup>st</sup> century BC, relations with India ... had to have begun at least in the 2<sup>nd</sup> century BC» is indeed very likely.

In this regard I have to point out two things: (1) <sup>14</sup>C analyses of samples from the lowest strata of Sumhuram, and (2) the presence of a significant quantity of the early Ḥaḍrami imitation series (coins with head of Athena on the obv., and standing owl and pseudo-Greek or Ḥaḍrami legend on the rev.) in numismatic material from Sumhuram (about 25% of all coins' finds). Both <sup>14</sup>C analyses and chronology of the early Ḥaḍrami imitation series give not the exact date but the date range – from the 3<sup>rd</sup> to the 1<sup>st</sup> centuries BC, which correspond in general with the dates of Indian imports. In this regard the idea of Alessandra Avanzini that before the construction of the walled city of Sumhuram, i.e. in the 3<sup>rd</sup>-2<sup>nd</sup> centuries BC, there was a settlement, a sort of *factoria*, of Ḥaḍrami traders involved in sea commerce (even though rather a small one and not fortified), seems to be very promising. In this case, the structure denoted as Monumental Building 2 could be considered as the remains of the 'early settlement' in Khor Rori, existing prior to the foundation of the walled city of Sumhuram as we know it. And the main goal for future investigations at the site would be to determine undisturbed cultural deposits of this 'early settlement', but this will be the subject of the next volumes of *Khor Rori Reports*.

*Alexander V. Sedov*

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Many people have been fundamental in the writing of this book. I am in debt to many of them for sharing their knowledge with generosity and enthusiasm.

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The study periods in Bonn were fundamental for my work. I wish to thank Burkhardt Vogt, Director of the Kommission für Archäologie Außereuropäischer Kulturen, for his kind hospitality at the Institute. Heidrun Schenk (KAVA- Bonn) opened doors for me during our study sessions together. We became good friends and I was shown (with passion and competence) pottery from Tissamaharama, which allowed me to know and recognize Indian pottery. Her expertise and her friendship, together with the sense of humor and kindness of Hans-Joachim Weisshaar, Former Director of the excavations at Tissamaharama, were of constant support during those times. Roberta Tomber (British Museum, London) shared, with extraordinary generosity, all her knowledge about pottery and gave me incomparable help and suggestions. It is a great honour for me that she accepted to contribute to this volume. Michel Mouton (CEFAS, Jeddah) has been so kind in sharing his knowledge with me about the pottery of the Gulf region and in being eager to reply to all my questions.

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Pasquino Pallecchi of the Soprintendenza Beni Archeologici della Toscana worked for many years on the pottery of Khor Rori, sharing still unpublished data and comments.

All the staff at the Office of the Adviser to HM the Sultan for Cultural Affairs has to be mentioned for the years of collaboration and the generosity in their help during the different stages of the work. Ali Al-Kathiri, Director of the Museum of the Frankincense Land, Salalah, and his staff provided everything I needed during the study of the pottery from Khor Rori.

I wish also to thank my friends and colleagues in Pisa, “le ragazze”, and in particular Chiara, Alessia and Irene, with Michele, for their friendship and the information we shared in the years of work together and all the students who worked with me on the pottery in Oman.

Sandra Lombardi has been much more than an editor. Without her this book would never have been published. Thanks for your patience, precision and accuracy.

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Last but not least, I wish to thank Federico and my family. Without their support, their help and their love none of this would ever have been possible.

*Alexia Pavan*

# Introduction

This report presents the typology of the pottery from Khor Rori, with supporting quantitative evidence, for the entire period of occupation of the city, from the 3<sup>rd</sup> century BC to the 5<sup>th</sup> century AD.<sup>1</sup>

The discussion includes materials coming from the excavated layers as well as surface findings and presents pottery from the settlement of Sumhuram itself, from the temple along the lagoon,<sup>2</sup> the necropolis north from the city<sup>3</sup> and the small structures connected with agricultural practices discovered east of the site.<sup>4</sup>

The material includes also the vessels discussed in the previous typology of the pottery from Khor Rori<sup>5</sup> which represents the starting point of our work, and the pottery catalogued in Report 2<sup>6</sup> till the first campaign of 2011 (SUM11A). Late Hellenistic and Roman pottery will be discussed in the contribution of Roberta Tomber.

Most of the pottery is unpublished, but it could be easily consulted on the on-line database of the Italian Mission To Oman – IMTO – ([imtodb.humnet.unipi.it](http://imtodb.humnet.unipi.it)).

## GENERAL REMARKS

The first general remark about the pottery from Khor Rori is that the assemblage rarely includes complete or restorable forms. Most of the vessels are fragmentary and usually worn and this makes it particularly difficult to define the original form of the vessels. Thus, in many cases, it was determined by external comparisons.

The second aspect we have to consider is that it is not unusual that matching fragments belonging to the same vessels have been found in different areas of the settlement,<sup>7</sup> but this is not surprising considering the small dimensions of the site, enclosed by monumental city walls, and its long occupation.

The third general consideration is, again, linked with the characteristics of the site: Sumhuram was a ‘port of trade’ involved, from its foundation, in a dense network of commercial trades and contacts (fig. 1). It was a point of transit, sorting and redistribution, and so it is logical to find that a large number of ceramics, for most imports. This has led to the recognition of a significant number of fabrics.

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<sup>1</sup> AVANZINI AND SEDOV 2005; AVANZINI 2008: 609-641; PAVAN AND SCHENK 2012; PAVAN 2015. More recently the topic has been presented by A. Avanzini in different lectures and talks: Paris, Académie des Inscriptions et Belles-Lettres; Warsaw, International Workshop ‘From the Red Sea to the Gulf’; Irinjalakuda, International Seminar ‘Imperial Rome, Indian Ocean Regions and Muziris’ (AVANZINI 2014).

<sup>2</sup> PAVAN AND SEDOV 2008.

<sup>3</sup> AVANZINI 2005.

<sup>4</sup> AVANZINI 2004.

<sup>5</sup> SEDOV AND BENVENUTI 2002.

<sup>6</sup> SEDOV 2008a, 2008b, 2008c, 2008d, 2008e.

<sup>7</sup> See, for example, the two matching fragments belonging to the same amphora and discovered in US174 and US275, found respectively inside and outside the city wall.

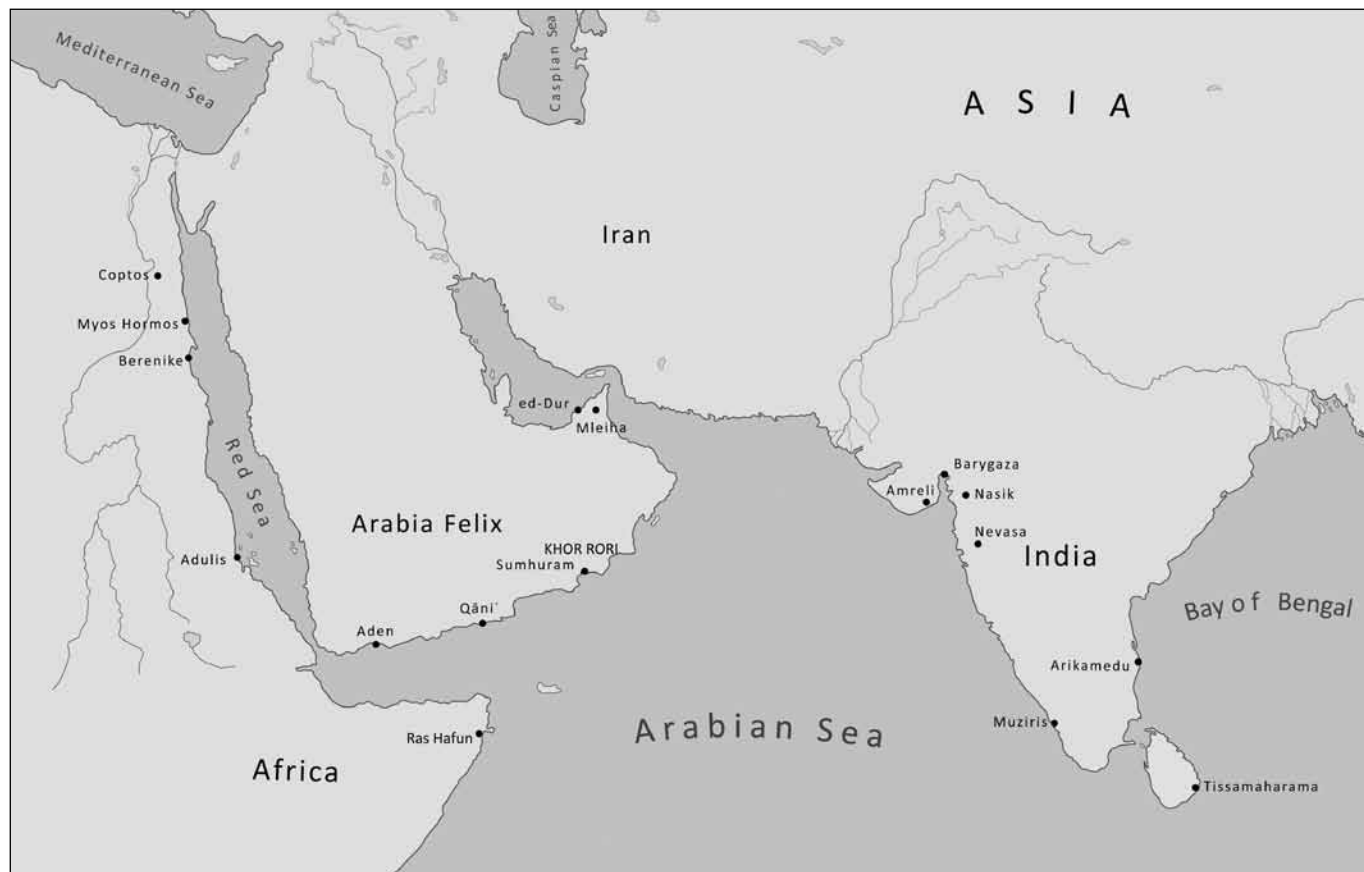


FIGURE 1 - *The port of Sumhuram and the main sites involved in the Indian Ocean trade.*

Considering this, we decided, in principle, not to consider discriminating the fabric in the classification of our types. However, when fabric is one of the characteristic features of the type, it has been highlighted already in the definition of the type.

The most common fabrics and/or those connected with some specific types, will be described according to their macroscopic features and their diffusion will be discussed as well, when data are available, in Chapter 1.

Comparisons with pottery from different assemblages from southern Arabia as well from foreign sites, will be moreover discussed. Also the percentage of the types inside the total ceramic assemblage and the distribution of the containers inside the city and according to the stratigraphy will be examined (for this aspect see also the paragraph about chronology).

## METHOD

### *Collection and selection of the material*

From 1997 the Italian Mission to Oman (IMTO henceforth) collected all the sherds from excavations. After the washing, the potsherds were counted and divided according to three macro-categories (kitchen, table and storage vessels) in order to proceed with statistic counting. Only the diagnostic sherds (rims, bases, handles and body sherds with decorations, inscriptions and graffiti) were then numbered and indexed according to general features (in addition to the dimensions: Munsell colour, characteristic of the paste, inclusions, surface type, surface treatment, decoration technique, method of manufacture).

From 2000 to 2011 about 26,000 potsherds have been processed, with about 3,200 diagnostic fragments.

### *Classification*

In the organization of the typology, instead of identifying individual types, independent from one another and each defined by a series of formal variables, the material has been arranged hierarchically, starting from issues related to the more general morphology up to the observation of secondary elements.

The numbering of the types was thus organized according to the following hierarchy: a roman number (I, II, III) indicating the ‘functional category’ (kitchen, table and storage vessels), three Arabic numbers indicating respectively the ‘form’, the ‘type’ and the ‘subtype’ and a letter indicating the ‘variant’.

In this way the typology is open to be increased for types, and subtypes and variants can be updated in progress.

What we have always to bear in mind is that we are discussing the typology of an entire site, to be considered as a nodal point in the transit and distribution of containers from different parts of the world, with many various imported vessels. Aim of the work is the presentation of a clear overview of the material discovered in Sumhuram. We are conscious that sometimes there are some simplifications but they have been dictated by the specific choice of not dwelling on the creation of countless types at the expense of clarity in the presentation of the material.

#### 1. The functional category

Considering the great quantity of materials, different for provenience – and so on for composition – and for shape, we decided to start our typological classification with a first division, based on the function of the vessels, maintaining the base-criterion adopted by A. Sedov<sup>8</sup> and used, in southern Arabia, also for the pottery of Yalā.<sup>9</sup>

This criterion is obviously basically founded on the interpretation. Three main categories have been so far individuated: vessels for the food preparation (kitchen vessels), vessels for storage and transportation<sup>10</sup> (storage vessels) and containers used for table purposes (table vessels comprising the fine wares as well as the glazed vessels and terra sigillata). The first category includes also oil lamps and vessels used with the double function of lids and lamps.

These three categories have been named with roman letters:

- I kitchen vessels
- II table vessels
- III storage vessels.

This preliminary classification takes account of the two factors ‘shape/function’, forming a whole of general morphological features, indicating or suggesting the use of a container.

This system is, of course, an idealized one, assuming a proper correspondence of forms and functions. Not always, however, is the distinction clear: in the case of the finding of a fragmentary rim, could sometimes be difficult to recognize a table vessel from a storage one; in this case, parameters such as the fabric, the thickness of the walls and the surface treatment have taken into account.

On the other hand, the presence of soot on the exterior of the vessels is not a morphological feature indicating the attribution to cooking vessels, also if it is a strong indicator of the function of the containers.

Moreover, there are vessels that could be used with different purposes, like some carinated pots, or re-used with a function different from the original one as well as the dish with circular base – SUM08A US256, 4 – probably used at the beginning for the table and after re-used for the kitchen, but these issues will be discussed case-by-case.

#### 2. The form

As almost generally accepted in the studies of pottery, the main component in the definition of a vessel is represented by morphology, i.e. the formal aspect of the container. We made a preliminary and general division in closed vessels (pots, jars, jugs, etc.) and open vessels (bowls, pans, plates, etc.) according to the dimensions of diameter of the mouth in relation to the maximum diameter of the body.

<sup>8</sup> SEDOV AND BENVENUTI 2002.

<sup>9</sup> DE MAIGRET 2003.

<sup>10</sup> The two functions of storage and transportation have been grouped under the generic term ‘storage’. The division, suggested by some authors (see for example RICE 1987) according to the period of storage or the distances of the transportation, was evaluated but not analyzed in detail.

Many vessels should be re-used with different functions (for example there is a quantity of rims re-used as stands, or handles re-used as domestic tools) and they will be discussed apart, in Chapter 5.

### 3. The type

The definition of the types follows again the morphology and in particular the general profile of the vessels (globular, carinated, ovoid, etc.), but yet with special attention to the shape of some elements as well as the inclination of the walls and the shape of necks and rims. Sometimes, among the features characterizing a type, we mentioned also the fabric, when typical of a particular class of vessels.

### 4. The subtype

The individuation of the subtypes follows the same criteria adopted for the types but with attention to some elements. The shape of the rims in particular (see, for example, the cooking pots) is a typical issue to be analyzed in the definition of the subtypes. This, for a series of reasons: they are relevant in understanding the function (to fit a lid, to close and seal a vessel), they give information about the manufacturing technique (hand/wheel-made) and they represent distinctive groups inside the pottery assemblages.

Usually these are variations of morphology of the neck or rim such as out-turned, rounded, flat, with grooves in the upper part of the lip in the case of the cooking pots.

### 5. The variant

For variants we mean all those additional features, usually not relevant from the functional point of view that, however, allow a distinction within the subtypes. The presence of grooves on the top of the shoulder is, for example, a perfect example of a variant as well as a difference in the diameter. The fabric could represent a significant variant as well.

To sum up, it will be possible to ‘read’ the vessel according the following scheme, for example in the case of a cooking pot with pointed rim and grooves at the shoulder:

I	l	l	l	a
FUNCTIONAL CATEGORY cooking vessel	FORM pot	TYPE pot with carinated/globular shape, short neck, out-turned rim	SUBTYPE pointed rim	VARIANT grooves at the shoulder

## CONTENTS AND COATINGS

Information related to the contents and coatings are very important in the evaluation of the function of the vessels and of their role in the dynamics of trade. The most interesting data are, of course, to be related to transport containers, as vehicles of goods and, so on, of commercial information.

Very few residues of organic material have been found, and analyzed samples are currently being studied. Rare has been the study of the contents in relation with South Arabian vessels, with the exception of recent and interesting analysis made on the jar Type 4100,<sup>11</sup> revealing the presence of bee’s wax inside the container.

In Sumhuram, bitumen is the most frequent coating, and it is attested above all with a specific type of containers: brownish neckless ovoid jars with out-turned thickened rounded rim (Type III.1.2.1), often defined ‘torpedo jars’ (fig. 2).<sup>12</sup>

However, more rarely, bitumen appears also in some amphorae<sup>13</sup> as well as in some straw-tempered jars with out-turned rim (Type III.1.4).<sup>14</sup>

<sup>11</sup> PORTER, STACEY AND DERHAM 2009.

<sup>12</sup> About bitumen and torpedo jars see TOMBER 2007.

<sup>13</sup> See for example the sherd SUM04B US29, 58 already discussed in PAVAN AND PALLECCHI 2009: 228.

<sup>14</sup> About bitumen and Ḥaḍrami storage jars see also BUFFA 2015. The presence of a resinous coating is noticed in Qanī’ by SEDOV (2010b: 206) in some of the so-called ‘céramique du type sud-arabique’, corresponding to our Type III.1.4.

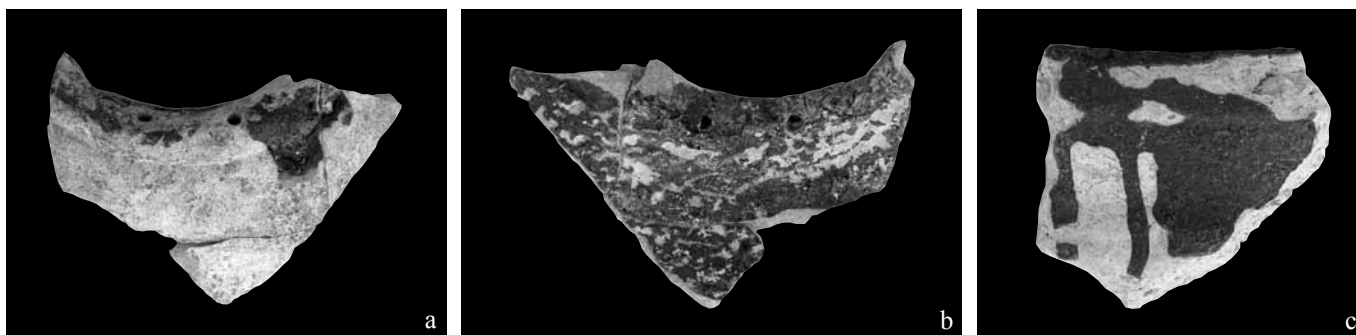


FIGURE 2 - *Sherds with bitumen. a, b: SUM04B US29, 63, bitumen coating on top of rim and in the interior; c: SUM04B US152, 17, bitumen coating on the interior and drops on the exterior.*

The function of the bitumen was clearly connected with the waterproofing of the containers, used to transport and store liquid foodstuffs, probably the Arabian wine mentioned in literary sources (*Periplus* 49).<sup>15</sup>

Other contents as well as hematite have been individuated inside some amphorae specimens.<sup>16</sup>

One of the most interesting data emerging over the last years about content analysis is the presence of purple-dye in a number of potsherds (fig. 3). The interesting feature is that it seems possible to establish a relation between this kind of content and some particular vessels: straw-tempered hole-mouth jars with walls incurving into rim and base and plain rim manufactured in southern Arabia (Type III.1.32).

What is not clear is, however, the reason for this connection of content and containers, characterized by coarse fabric. Were they really used to store purple-dye? Were they used to process it? Or were they used to immerse fabrics for the colouring process?<sup>17</sup>



FIGURE 3 - *Potsherds with purple-dye from US491.*

<sup>15</sup> CASSON 1989: 81.

<sup>16</sup> P. Pallecchi, personal communication.

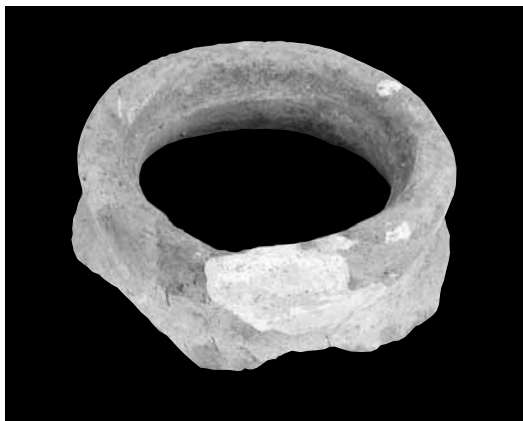
<sup>17</sup> The topic is currently in course of study by the author and dr. Erika Ribechini, Department of Chemistry, University of Pisa. The first chemical results have been presented at the 40<sup>th</sup> 'International Symposium on Archaeometry' (Los Angeles, May 19-23, 2014).



## SEALING PROCEDURES

Considering the remains left on many storage jars, it could be guessed that plaster/gypsum was frequently used to seal storage containers.<sup>18</sup> Presently, only a thick layer placed around the mouth of the vessel is sometimes visible, but we cannot exclude that originally discs of plaster were placed at the mouths of the containers, eventually stamped with the name of the dealer.<sup>19</sup> This procedure, in Sumhuram, has so far been attested exclusively in relation with straw-tempered jars (fig. 4), while for amphorae and other storage vessels different devices were used, probably clay or cork stoppers covered by wax, plaster or pitch.

The finding of a lump of bitumen, flat on one side and slightly convex on the other (fig. 5), suggests, on the other hand, the possibility of a different procedure for sealing jars with different kinds of ‘stoppers’.<sup>20</sup>



FIGURES 4 - 5 - SUM08B US162, 49, rim with gypsum traces. Lump of bitumen with plano-convex section.

## GRAFFITI AND INSCRIPTIONS (PLS 89-90)

Different kinds of signs to be interpreted as symbols, monograms or inscriptions have been individuated on the pottery vessels from Sumhuram. In most cases it is South Arabian letters or monograms incised, generally after firing, but in some cases even before, on storage containers from southern Arabia. A single attestation of painted letters occur on the surface of a wall of storage jar SUM10C US174, 141 (pl. 89/5).

Graffiti and symbols relevant to the Indian tradition are reported as well, as the motif in the form of a loop, common in many specimens found in India. To the fragmentary wall already published<sup>21</sup> two new attestations have been added, from recent excavations (SUM11A US174, 241: pl. 37/5 and SUM10C US470, 1: pl. 25/6). Identical symbols have been found at the sites of Nevasa,<sup>22</sup> Ter<sup>23</sup> and Bhokardan<sup>24</sup> where they are interpreted as the Brahmi letter ‘Ma’. In Sri Lanka, at the site of Tissamaharama,<sup>25</sup> the symbol is frequently attested but no special meanings have been attributed to it. The same symbol/letter, this time applied, has been found on some potsherds from Arikamedu.<sup>26</sup>

<sup>18</sup> See also ANTONINI AND AGOSTINI 2010: 31.

<sup>19</sup> COSTA 1991.

<sup>20</sup> This procedure is attested, for example, in Qala‘at al-Bahrein (HØJLUND AND ANDERSEN 1994: 408-409).

<sup>21</sup> SEDOV AND BENVENUTI 2002: 234-235, pl. 18/5.

<sup>22</sup> SANKALIA *ET AL.* 1960: 272, fig. 122/1, 275, 320, fig. 150/1, 322.

<sup>23</sup> CHAPEKAR 1969: 70-71, fig. 25/30.

<sup>24</sup> DEO AND GUPTA 1974: 104, fig. 16 B.

<sup>25</sup> SCHENK 2001: 148, fig. 113/6.21, 149, fig. 114/8.9, 151, fig. 116/1,3,9.

<sup>26</sup> BEGLEY 1996b: 126, fig. 4/8-9.

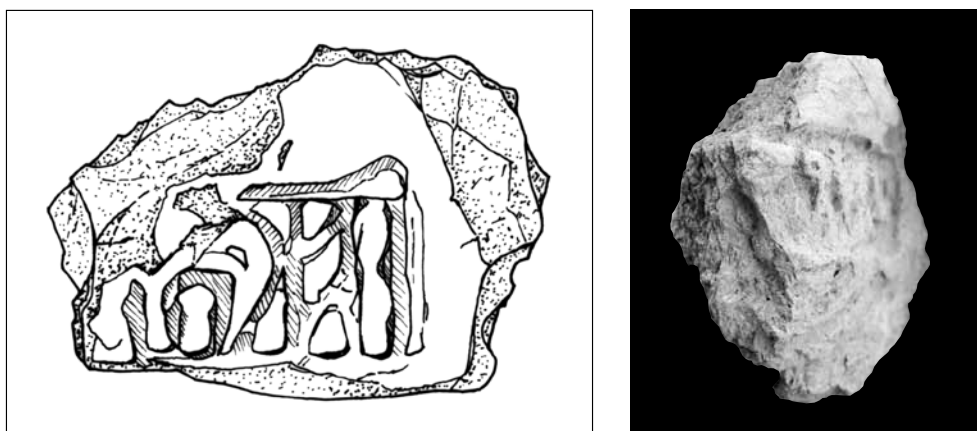
Also noteworthy, among the potsherds from Sumhuram, are two Indian inscriptions.

One, written in Prākṛit and dated approximately to the 4<sup>th</sup> century AD, has been interpreted as «something related to any kind of wheeled transport or a person related to it – coachmen, charioteer»<sup>27</sup> while the second one, realized on a re-used fragment of amphora, has been deciphered in 2012 by Prof. K. Rajan during the international ceramic workshop ‘The Indian Ocean Trade and the Archaeology of Technology at Pattanam in Kerala’.<sup>28</sup>

The script in Tamil Brahmi – *nantai kiirna* – signifies a personal name and probably alludes to the owner of the container.

No stamps have been found in connection with amphorae, as happened, in south-eastern Arabia, at Mleiha,<sup>29</sup> but the upper part of an amphora with incised Greek letters has been discovered (SUM08A US256, 22).<sup>30</sup>

What are very interesting, moreover, are two seal impressions with South Arabian letters individuated on walls of jars rich in organic temper (Straw Temper Ware). They are SUM06A US144, 15 (fig. 6) and SUM10A US404, 3 (fig. 7).<sup>31</sup> The impressions have probably been done with a bronze seal<sup>32</sup> when the clay was still wet and could be interpreted as ‘potter stamps’, made in the manufacturing workshop. Similar stamps have been found on plaster fragments sealing jars from the necropolis of Barāqish,<sup>33</sup> where they probably allude to the trader.



FIGURES 6 - 7 - SUM06A US144, 15, seal impression; SUM10A US404, 3, seal impression.

## CHRONOLOGY

Different constructional phases were determined for most of the main areas<sup>34</sup> and their precise chronological evaluation is in course of completion.

The chronological frame for the site has been clearly individuated and it is comprised in the span-time between the 3<sup>rd</sup> century BC and the 5<sup>th</sup> century AD. Three main phases dated respectively from the 3<sup>rd</sup> century BC to the 1<sup>st</sup> century

<sup>27</sup> BUKHARIN 2002.

<sup>28</sup> SUBRAMANIAN 2012; see *infra* Tomber, fig. 14/5.

<sup>29</sup> SALLES 1980: 79-80; MOUTON 2008: 48, fig. 21/1-6; MONSIEUR *ET AL.* 2013.

<sup>30</sup> See *infra* Tomber, fig. 16/1.

<sup>31</sup> A third stamp, readable, although again not complete, has been discovered in the third campaign of 2012 (SUM12C US56, 49). The name *Dr' [kr]* stamped on the base is the same attested in some jars discovered in the Royal Palace of Timna<sup>1</sup> where it is to be read as *Dr' kr*, possibly an abbreviation of *Dr' krb* (AVANZINI 2015).

<sup>32</sup> For the sealing procedure in southern Arabia see COSTA 1991.

<sup>33</sup> ANTONINI AND AGOSTINI 2010: 26-27, pl. 39.

<sup>34</sup> BUFFA AND SEDOV 2008; SEDOV 2008a, 2008b, 2008d.

AD, from the 1<sup>st</sup> century AD to the 3<sup>rd</sup> century AD and from the 3<sup>rd</sup> century AD till the complete abandonment of the site, have so far been individuated.

A scattered Islamic occupation has been noted in some parts of the settlement itself and not only on the territory,<sup>35</sup> as stated till now, as confirmed by some 'late' potsherds attributable to the Islamic period and not discussed here.

Regarding the general evaluation of the stratigraphy, it has to be said that the excavations of the last years do not show a clear situation, above all in relation to the most ancient occupational phases.

Here many strata, both inside and outside the city wall,<sup>36</sup> have been discovered which are perfectly sealed by floors of the second constructional phase, but they are characterized by mixed materials. In other words under the buildings and streets of the second phase, a single 'unit' of findings was uncovered, impossible to divide according to a chronological grid, where Indian imports of the 2<sup>nd</sup> century BC (see, for example, Rouletted Ware) were found together with amphorae sherds of the very late 1<sup>st</sup> century BC/beginning of the 1<sup>st</sup> century AD.

If this situation does not allow for a clear overview of the arrival of the different types in Sumhuram, at least the general lines of the circulation of goods and pots could be defined.

While it seems very likely that imports from the Mediterranean area started to arrive in the late 1<sup>st</sup> century BC, the relations with India, with consequent exchange of vessels (not only of high value, but also utilitarian) had to have begun at least in the 2<sup>nd</sup> century BC.<sup>37</sup> The same observation could be applied also in the case of the vessels of Yemeni provenience and, in fact, many of our potsherds of first phase present clear analogies with Ḥaḍrami pottery assemblages of the 3<sup>rd</sup>/2<sup>nd</sup> centuries BC.

Notwithstanding these preliminary remarks, in the following discussion of the typology, we will try, however, to relate the vessels with the development of the types, referring not only to the internal data from the excavations, but also to data from other excavated contexts.

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<sup>35</sup> For the occupation of the territory in Islamic period, with particular reference to the pottery, see ROUGEULLE 2008.

<sup>36</sup> It's the case, for example, of US174 (inside the city wall) and US275 (outside the city wall).

<sup>37</sup> See PAVAN AND SCHENK 2012 and PAVAN 2015.

# 1. Notes on the wares discovered in Khor Rori

In this chapter there will be a discussion of the most common wares attested at the site and of those, occurring in few cases, but clearly recognizable and attributable to specific geographic areas and/or historical periods. Other fabrics have been however recognized at Sumhuram and they will be described, by their macroscopic characteristics, in the catalogue together with the specific vessels.

## SHORT COMPILATION OF THE WARES

BAW	Brown Aksumite Ware
BGW	Black and Grey Ware
BRW	Black and Red Ware
BSW	Black Slipped Ware
CGW	Coarse Grey Ware
CRW 1, 2	Coarse Red Ware, variants 1 and 2
FGW	Fine Grey Ware
FOPW	Fine Orange Painted Ware
FRSW	Fine Red Slipped Ware
GW	Glazed Ware
GSTW	Greenish Straw Temper Ware
GTW	Grit Temper Ware
PW	Pattanam Ware
PDW	Paddle Impressed Ware
RAW	Red Aksumite Ware
RSW	Red Slipped Ware
RW	Rouletted Ware
SHTW 1, 2	Shell Temper Ware, variants 1 and 2
STW	Steatite Temper Ware
STRTW	Straw Temper Ware
SW	Sandy Ware
TTW	Talc Temper Ware, variants 1 and 2
VTW	Vegetal Temper Ware